

WE CLAIM:

1. An isolated bacterial apoptogenic-bacteriocin capable of inducing apoptosis in eukaryotic tumor cells, cancer cells, or cells undergoing aberrant growth, wherein the apoptogenic-bacteriocin is not toxic to normal eukaryotic cells.
2. The apoptogenic-bacteriocin of Claim 1 which is a pore-forming or channel forming bacterial protein of molecular weight less than 10,000.
3. The apoptogenic-bacteriocin of Claim 2 which is a pore-forming or channel forming bacterial protein of molecular weight of about 2,500 to about 10,000.
4. The apoptogenic-bacteriocin of Claim 1 which is microcin E492 or microcin 24.
5. An isolated bacterial apoptogenic-bacteriocin capable of inducing apoptosis in eukaryotic tumor cells, cancer cells, or cells undergoing aberrant growth, wherein the apoptogenic-bacteriocin is not toxic to normal eukaryotic cells, comprising the amino acid sequence set out in any of SEQ ID NOs:1, 2, 3 or 4 or an active portion or analog thereof.
6. An isolated derivative of the apoptogenic-bacteriocin of Claim 1, wherein the apoptogenic-bacteriocin is covalently or non-covalently linked to an anti-cancer or anti-tumor compound or agent or to a compound, agent or polypeptide which targets or otherwise directs the apoptogenic-bacteriocin to tumor or cancer cells.
7. A pharmaceutical composition comprising the apoptogenic-bacteriocin of Claim 1 and a pharmaceutically acceptable carrier, vehicle or diluent.
8. A pharmaceutical composition comprising the apoptogenic-bacteriocin selected from the group of microcin E492 and microcin 24 and a pharmaceutically acceptable carrier, vehicle or diluent.

9. A pharmaceutical composition comprising an apoptogenic-bacteriocin comprising an amino acid sequence selected from the group of SEQ ID NO: 1, SEQ ID NO: 2, SEQ ID NO:3 or SEQ ID NO:4 and a pharmaceutically acceptable carrier, vehicle or diluent.
10. A recombinant DNA molecule or cloned gene that has a nucleotide sequence or is complementary to a DNA sequence capable of encoding the amino acid sequence set out in any of SEQ ID NO: 1, SEQ ID NO: 2, SEQ ID NO:3 or SEQ ID NO:4, or an active portion or analog thereof.
11. A unicellular host transformed with the cloned gene or recombinant DNA molecule of Claim 10.
12. A method for apoptosis of tumor cells, cancer cells or cells undergoing aberrant growth in a mammal, comprising administering to said mammal an effective amount of the apoptogenic-bacteriocin of Claim 1.
13. A method for apoptosis of tumor cells, cancer cells or cells undergoing aberrant growth, comprising administering to said mammal an effective amount of the apoptogenic-bacteriocin of Claim 1 in combination with an anti-tumor or anti-cancer agent or compound.
14. A method for apoptosis of tumor cells, cancer cells or cells undergoing aberrant growth in a mammal, comprising administering to said mammal an effective amount of apoptogenic-bacteriocin comprising the amino acid sequence of SEQ ID NO: 1, 2, 3 or 4, or an active portion or analog thereof.
15. A method for reducing or blocking eukaryotic cell growth in a mammal comprising administering to said mammal of an effective amount of the apoptogenic-bacteriocin of Claim 1.
16. A method for reducing or blocking eukaryotic cell growth in a mammal comprising administering to said mammal an effective amount of apoptogenic-

bacteriocin comprising the amino acid sequence of SEQ ID NO: 1, 2, 3 or 4, or an active portion or analog thereof.

17. A method for the treatment or prevention of cancer in a mammal by administration to said mammal of an effective amount of the apoptogenic-bacteriocin of Claim 1.

18. A method for the treatment or prevention of cancer in a mammal by administration to said mammal of an effective amount of the apoptogenic-bacteriocin of Claim 1 in combination with an anti-tumor or anti-cancer agent or compound.

19. A method for the treatment or prevention of cancer in a mammal by administration to said mammal of an effective amount of apoptogenic-bacteriocin comprising the amino acid sequence of SEQ ID NO: 1, 2, 3 or 4, or an active portion or analog thereof.

20. A method for apoptosis of tumor cells, cancer cells or cells undergoing aberrant growth in a mammal, comprising infecting said mammal with a bacteria, virus or other pathogen expressing an effective amount of the apoptogenic-bacteriocin of Claim 1.

21. A method for apoptosis of tumor cells, cancer cells or cells undergoing aberrant growth in a mammal, comprising infecting said mammal with a bacteria, virus or other pathogen expressing an effective amount of apoptogenic-bacteriocin comprising the amino acid sequence of SEQ ID NO: 1, 2, 3 or 4, or an active portion or analog thereof.